Product Brief

Intel® Server Board S1200BT family
Intel® Server System R1304BT family
Intel® Server System P4304BT family
Intel® Server Chassis P4304 family

An entry-level family of general-purpose server products designed for small to medium-sized business applications, including 1U rack systems supporting advanced management features and rich I/O.

Key Features

- Supports Intel® Xeon® processor E3 1200 product family (including lower power processors)
- Highly-scalable DDR3 memory (up to 4 DIMMs)
- Up to 5 slots high-speed PCI Express* 2.0 I/O (optional I/O module for 6 total I/O slots)
- Highly-flexible network and storage configurations
- Upgradable Intel® Remote Management Module supporting remote KVM, and dedicated NIC module

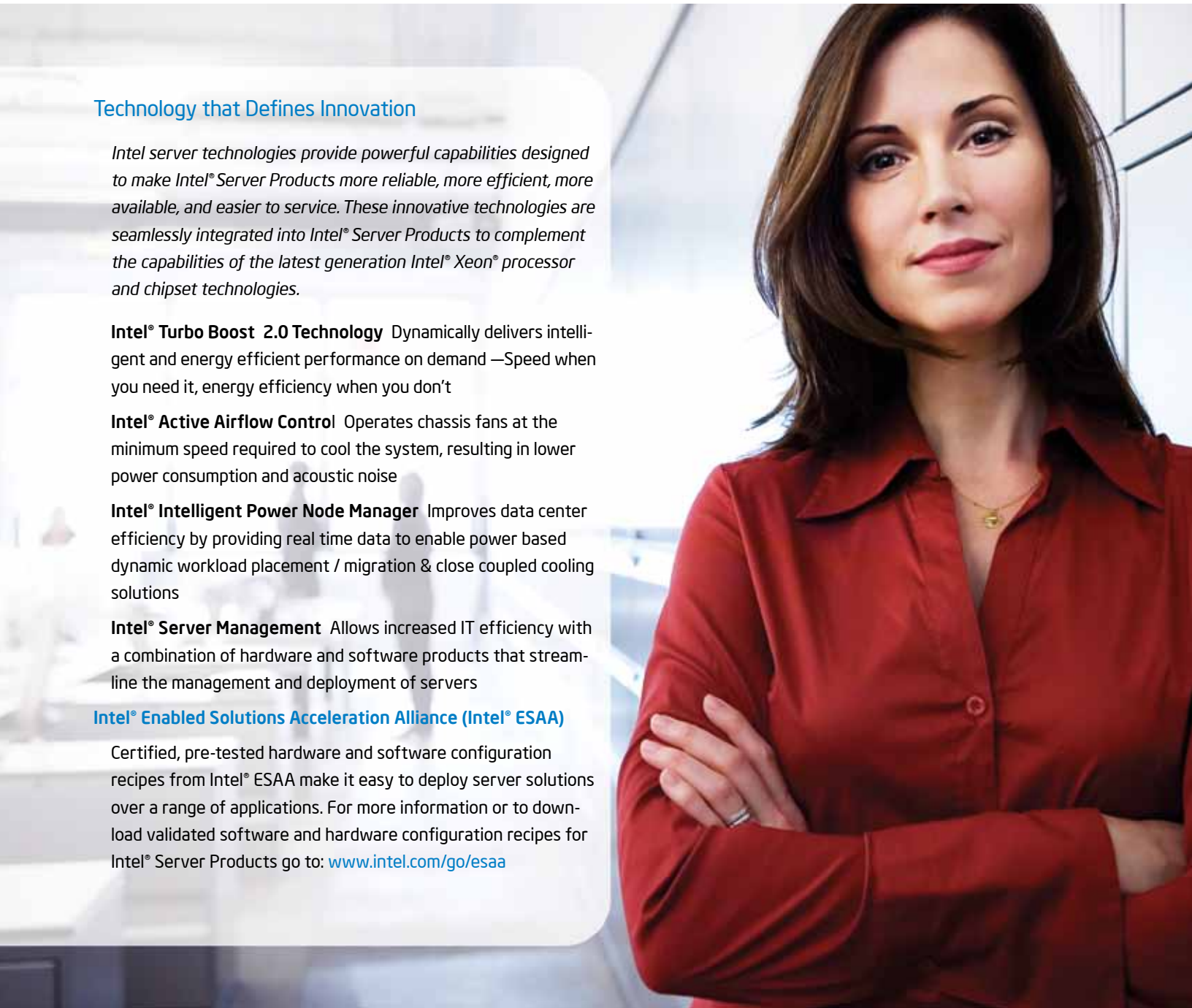
Target Applications: *Small and medium-sized business applications including web servers, file and print servers, e-mail servers, storage servers and vertical-specific business applications. Also suitable for High Performance Computing (HPC) and embedded applications.*

Features and Benefits

- **Supports Intel® Xeon® processor E3 1200 product family** Delivers increased, intelligent and energy-efficient performance on demand
- **Fast, scalable and energy-efficient DDR3 memory** Up to 4 DIMMs unbuffered DDR3 ensure ample capability and energy-efficient performance for any application

For S1200BTL models

- **Expandable I/O architecture** Up to 5 I/O slots, including up to four high-speed PCI Express* 2.0 slots, provide flexible expansion with optional Intel® I/O SAS Module available
- **Rich I/O for rack deployment** Mezzanine slot for internal SAS module provides excellent upgradeability
- **Flexible storage configurations** Six integrated SAS or SATA ports via chipset, optional internal quad-port modules with either SAS and/or SAS RAID support maximize storage flexibility without consuming a PCI slot
- **Integrated manageability with optional Intel® Remote Management Module** An integrated baseboard management controller with IPMI 2.0 support helps lower IT operating costs while increasing system uptime; optional KVM support and dedicated NIC module provide a complete remote management upgrade path



Technology that Defines Innovation

Intel server technologies provide powerful capabilities designed to make Intel® Server Products more reliable, more efficient, more available, and easier to service. These innovative technologies are seamlessly integrated into Intel® Server Products to complement the capabilities of the latest generation Intel® Xeon® processor and chipset technologies.

Intel® Turbo Boost 2.0 Technology Dynamically delivers intelligent and energy efficient performance on demand —Speed when you need it, energy efficiency when you don't

Intel® Active Airflow Control Operates chassis fans at the minimum speed required to cool the system, resulting in lower power consumption and acoustic noise

Intel® Intelligent Power Node Manager Improves data center efficiency by providing real time data to enable power based dynamic workload placement / migration & close coupled cooling solutions

Intel® Server Management Allows increased IT efficiency with a combination of hardware and software products that streamline the management and deployment of servers

Intel® Enabled Solutions Acceleration Alliance (Intel® ESAA)

Certified, pre-tested hardware and software configuration recipes from Intel® ESAA make it easy to deploy server solutions over a range of applications. For more information or to download validated software and hardware configuration recipes for Intel® Server Products go to: www.intel.com/go/esaa

Intel® Server Board S1200BT Technical Specifications

Order Code	S1200BTL	S1200BTS
Form Factor	ATX (12" x 9.6")	uATX (9.6" x 9.6")
Processors	Intel® Xeon® processor E3 1200 product family	Intel® Xeon® processor E3 1200 product family
Chipset	Intel® C204 chipset	Intel® C202 chipset
Memory Capacity	Four DDR3 DIMM sockets (Unbuffered only) • Two channel native (1066/1333MHz)	Four DDR3 DIMM sockets (Unbuffered only) • Two channel native (1066/1333MHz)
Storage	Six SATA ports (2x6 Gbps, and 4x3 Gbps) via Intel® C204 chipset with Intel® Embedded Server RAID Technology / Intel® Rapid Storage Technology	Six SATA ports (3 Gbps) via Intel® C202 chipset with Intel® Embedded Server RAID Technology / Intel® Rapid Storage Technology
Intel® RAID Support *Validated with Intel® RAID Controllers[1]*	Integrated SATA: • Intel® Embedded Server RAID Technology with host-based SW RAID levels 0/1/10 • Intel® Rapid Storage Technology with host-based SW RAID levels 0/1/10/5	Integrated SATA: • Intel® Embedded Server RAID Technology with host-based SW RAID levels 0/1/10 • Intel® Rapid Storage Technology with host-based SW RAID levels 0/1/10/5
Expansion Slots	Five total I/O slots: • One PCI Express* 2.0 x8 slot (x16 mechanical) • Three PCI Express 2.0 x4 slot (x8 mechanical) • One PCI 32/33 (5V) slot • One SAS Mezzanine slot for optional SAS module	Four total I/O slots: • One PCI Express 2.0 x8 slot (x16 mechanical) • One PCI Express 2.0 x8 slot (x8 mechanical) • One PCI Express 2.0 x4 slot (x8 mechanical) • One PCI 32/33 (5V) slot
Integrated LAN	Dual Gigabit NICs (Intel® 82574 and 82579 Gigabit Ethernet Controllers)	Embedded Intel® Dual Gigabit Controller 82574L and 82579
Integrated Graphics	128MB DDR3 memory, 8MB usable by graphics plus shared system memory	SM712 Graphic Controller
Management Hardware	Integrated IPMI 2.0 baseboard management controller Intel® Remote Management Module 4 or Intel® RMM 4 Lite	Fan Speed Control via Super I/O chip
Management Software	Intel® Deployment Assistant Intel® Multi-Server Manager Intel® Active System Console Intel® Intelligent Node Manager	Intel® Deployment Assistant
Integrated Security	Header for optional Intel® Trusted Platform Module (Intel® TPM Module)	Header for optional Intel® TPM Module

Intel® Server Board S1200BTL Rear I/O Layout

Value priced 1U system with features previously found only on higher end servers

- BMC fully supporting IPMI 2.0 with Remote Management option
- Upgrades for SAS and Intel® TPM modules available
- Supports up to 4 Hot Swap HDDs

R1304BTLSHBN

Intel® Server System R1304BTLSHBN Technical Specifications

Order Code	R1304BTLSHBN R1304BTLSHBNNA
Form Factor	1U Rack
Server Board	S1200BTL
Drive Bays	Four hot-swap 2.5" or 3.5" SATA HDDs (Supports SAS with optional add-in) Optional slim-line optical drive
System Cooling	3 x 40mm fixed fans with duct
Power Supply	350-watt non-redundant power supply
Add-in Card Support	One full height PCI Express* 2.0 x8 through riser card in slot 6
I/O Expansion Module Support	Optional SAS Module
Dimensions (H x W x D)	17.24" x 1.75" x 21.8" (438mm x 45mm x 553mm)
Components Included **Heat sinks not included*	• Intel® Server Board S1200BTL • Intel® Server Chassis R1304 • 350-watt non-redundant power supply • One low profile PCI Express* riser card • Slim-line CD-ROM bay • Pre-routed cables • SATA/SAS backplane
Management Hardware	Integrated IPMI 2.0 baseboard management controller Optional: Intel® Remote Management Module 4 or Intel® RMM 4 Lite Intel® Trusted Platform Module
Management Software	Intel® Deployment Assistant Intel® System Management Software

1U servers that are the lowest priced rack systems ever offered by Intel

- Optional SAS or Remote Management module for R1304BTL model only
- Supports up to 4 fixed HDDs

R1304BTLSFAN

R1304BTSSFAN

Intel® Server System R1304BTLSFAN/ R1304BTSSFAN Technical Specifications

Order Code	R1304BTLSFAN R1304BTLSFANNA	R1304BTSSFAN R1304BTSSFANNA
Form Factor	1U Rack	1U Rack
Server Board	S1200BTL	S1200BTS
Drive Bays	Four fixed 2.5" or 3.5" SATA HDDs Optional slim-line optical drive	Four fixed 2.5" or 3.5" SATA HDDs Optional slim-line optical drive
System Cooling	3 x 40mm fixed fans with duct	3 x 40mm fixed fans with duct
Power Supply	250-watt non-redundant power supply	250-watt non-redundant power supply
Add-in Card Support	One full height PCI Express* 2.0 x8 through riser card in slot 6	One full height PCI Express* 2.0 x8 through riser card in slot 4
I/O Expansion Module Support	Optional SAS Module	NA
Dimensions (H x W x D)	17.24" x 1.75" x 21.8" (438mm x 45mm x 553mm)	17.24" x 1.75" x 21.8" (438mm x 45mm x 553mm)
Components Included *****Heat sinks not included*	• Intel® Server Board S1200BTL • Intel® Server Chassis R1304 • 250-watt non-redundant power supply • One low profile PCI Express* riser card • Slim-line CD-ROM bay • Pre-routed cables	• Intel® Server Board S1200BTS • Intel® Server Chassis R1304 • 250-watt non-redundant power supply • One low profile PCI Express* riser card • Slim-line CD-ROM bay • Pre-routed cables
Management Hardware	Integrated IPMI 2.0 baseboard management controller Optional: Intel® Remote Management Module 4 or Intel® RMM 4 Lite Intel® Trusted Platform Module	Fan Speed Control via Super I/O chip
Management Software	Intel® Deployment Assistant Intel® System Management Software	Intel® Deployment Assistant

Entry pedestal servers designed for small businesses

- Preconfigured options save time and money
- Server efficiency and reliability improve performance over desktop platforms

Intel® Server System P4304BT Technical Specifications

Order Code	P4304BTLSFCN	P4304BTLSHCN	P4304BTSSFCN
Form Factor	4U Pedestal	4U Pedestal	4U Pedestal
Server Board	S1200BTL	S1200BTL	S1200BTS
Drive Bays	Up to four 2.5" or 3.5" fixed SATA HDDs	Up to four 2.5" or 3.5" hot-swap SATA HDDs (Supports SAS with optional add-in)	Up to four 2.5" or 3.5" fixed SATA HDDs
Peripheral Bay(s)	Media Bays (3 x 5.25")	Media Bays (3 x 5.25")	Media Bays (3 x 5.25")
System Cooling	One 92mm rear chassis fan	One 92mm rear chassis fan	One 92mm rear chassis fan
Power Supply	365W high efficiency non-redundant power supply, 80Plus Silver	365W high efficiency non-redundant power supply, 80Plus Silver	365W high efficiency non-redundant power supply, 80Plus Silver
Add-in Card Support	Five full height, full length slots	Five full height, full length slots	Four full height, full length slots
I/O Expansion Module Support	Optional SAS Module	Optional SAS Module	NA
Tool-less features	Peripherals bays, optional hot-swap bays, power supplies, PCI slots	Peripherals bays, optional hot-swap bays, power supplies, PCI slots	Peripherals bays, optional hot-swap bays, power supplies, PCI slots
Bezel Features	Customizable panel options	Customizable panel options Lockable	Customizable panel options
Front Connectors	2 x USB	2 x USB	2 x USB
Pedestal Dimensions (H x W x D)	17.24" (438mm) x 6.81" (173mm) x 21.5" (546mm)	17.24" (438mm) x 6.81" (173mm) x 21.5" (546mm)	17.24" (438mm) x 6.81" (173mm) x 21.5" (546mm)
Management Hardware	Integrated IPMI 2.0 baseboard management controller Optional: Intel® Remote Management Module 4 or Intel® RMM 4 Lite Intel® Trusted Platform Module	Integrated IPMI 2.0 baseboard management controller Optional: Intel® Remote Management Module 4 or Intel® RMM 4 Lite Intel® Trusted Platform Module	Fan Speed Control via Super I/O chip
Management Software	Intel® Deployment Assistant Intel® System Management Software	Intel® Deployment Assistant Intel® System Management Software	Intel® Deployment Assistant
Acoustic	Ultra quiet chassis design	Ultra quiet chassis design	Ultra quiet chassis design

Designed for office environments

- Variable fan speed control enables ultra quiet system
- Flexible and expandable chassis options

Intel® Server Chassis P4304 Technical Specifications

Order Code	P4304XXSFCN	P4304XXSHCN
Form Factor	4U Pedestal	
Drive Bays	Up to four 3.5" fixed SAS/SATA HDDs	Up to four 3.5" hot-swap SAS/SATA HDDs
Peripheral Bay(s)	Media Bays (3 x 5.25")	
System Cooling	One 92mm rear chassis fan	
Power Supply	365W high efficiency non-redundant power supply, 80Plus Silver	
Tool-less features	Peripherals bays, optional hot-swap bays, power supplies, PCI slots	
Bezel Features	Customizable panel options	Customizable panel options Lockable
Front Connectors	2 x USB	
Pedestal Dimensions (H x W x D)	17.24" (438mm) x 6.81" (173mm) x 21.5" (546mm)	
Rack Dimensions (H x W x D)	6.81" (173mm) x 17.24" (438mm) x 21.5" (546mm)	
Acoustic	Ultra quiet chassis design	

Safety and EMC Regulatory Compliance

Regulatory compliance for an Intel host system is based on the use of an Intel server base board that was tested in the host chassis and found compliant. Intel server base boards and host chassis are tested to Class A EMC requirements. Intel server products comply with RoHS (Restriction of Hazardous Substances).

Region (Compliance Obtained)	Board Markings	Host Chassis Markings
Argentina (IRAM)	Regulation N/A	
Australia (ACA) / New Zealand (MED)		
Belarus	Regulation N/A	
Canada		
	ICES-003	
Europe (EU Directives) - LVD & EMC require CE mark; No mark required for RoHS; WEEE marking added voluntarily for end integrator convenience		
Germany GS for Chassis Only; German Green Dot (Duales System Deutschland) for Board Packaging Only		
International Compliance (CB Report & CISPR Emission & Immunity)	Marking Not Required	
Japan (VCCI for chassis only) & Japan Recycling Marks on Board Retail Packaging Only	Regulation N/A	
		Marking Not Required
Korea (KCC)		
Russia (GOSSTANDART)	Regulation N/A	
Taiwan (BSMI)		
Ukraine (UKRTEST)	Regulation N/A	Marking Not Required
United States NRTL & FCC (For Board Products FCC Notation May Be in Documentation)		
	This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation	

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Intel Server Products.
Worldwide Programs Supported Include:

Energy Star*

Climate Savers Computing*

Restriction of Hazardous Substances Directive*

80 PLUS*

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Select compatible components for a complete server system: www.intel.com/go/serverconfigurator

Why choose Intel® Server Products? Quality, flexibility, support. Learn more: www.intel.com/go/serverproducts

[1] For tested Intel® RAID Controller options go to http://support.intel.com/support/motherboards/server/compat_matrix.htm

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